

### REMARKS

In the Office Action dated February 23, 2007, claim 20 was rejected under 35 U.S.C. § 112, ¶ 1; and claims 1-21 were rejected under 35 U.S.C. § 103 as obvious over U.S. Patent No. 6,931,365 (Mehta) in view of U.S. Patent No. 6,405,173 (Honarvar).

### DECLARATION UNDER 37 C.F.R. § 1.131 TO OVERCOME MEHTA

The Office Action indicated that the Rule 131 Declaration filed December 1, 2006 has been considered effective in overcoming the previously asserted reference Adler.

In view of the new ground of rejection over Mehta and Honarvar, Applicant is enclosing herewith another Rule 131 Declaration to overcome Mehta, which is based on a provisional application (Serial No. 60/256,587) having a filing date of December 18, 2000.<sup>1</sup>

The content of the Rule 131 Declaration to overcome Mehta, attached hereto, is substantially identical to the Rule 131 Declaration filed December 1, 2006, except that the attached Rule 131 Declaration to overcome Mehta attests to an invention date earlier than December 18, 2000 (the provisional application filing date for Mehta).

Exhibits A-E to the attached Rule 131 Declaration to overcome Mehta are the same exhibits attached to the Rule 131 Declaration filed December 1, 2006.

The attached Rule 131 Declaration to overcome Mehta provides sufficient evidence to support conception and actual reduction to practice of the invention (at least with respect to claims 1, 2, 4-7, 9-11, 13-15, and 17-21) prior to December 18, 2000. Therefore, withdrawal of the rejection of the claims as being obvious over Mehta and Honarvar is respectfully requested.

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<sup>1</sup> Applicant does **not** admit that Mehta is in fact entitled to the priority date of December 18, 2000.

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Amendment Dated May 23, 2007  
Reply to Office Action Mailed February 23, 2007

REJECTION UNDER 35 U.S.C. § 112, ¶ 1

Claim 20 has been amended to render the § 112 rejection moot.

REJECTION UNDER 35 U.S.C. § 103

Since the invention date of the present application is prior to the effective date of the Mehta, the § 103 rejection has been overcome.

Moreover, even if Mehta qualifies as prior art with respect to the claimed subject matter, the Office Action has not established a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988) (holding that the PTO has the burden under § 103 to establish a *prima facie* case of obviousness, and that this burden can be satisfied only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references).

The Office Action conceded that Mehta fails to disclose rules for players that define a decision-making process tree, and that Mehta fails to disclose translating the player definitions into at least one codified script and executing the at least one codified script. 2/23/2007 Office Action at 5. However, the Office Action stated that Honarvar provides the teaching regarding “decision trees,” and that “[i]t was also old and well known in the art of computer programming, specifically in the art of programming for automated economic games simulation, to use a scripting language to define and execute the simulation.” *Id.* at 5-6. As support for the latter assertion, the Office Action cited an article co-authored by the inventor Kay-Yut Chen: “Computer Games and Economics Experiments,” HP Laboratories, November 2002.

The passage in the Chen article specifically relied upon by the Office Action is the following statements in the Chen article:

While the key innovation of the MUMS system is its script language, the idea of script languages for particular games is not new. In chess for example, there are a few languages have been developed to simplify the knowledge acquiring process and to help creating better AI. (George, M. et al. 1990, Donninger, C. 1996). Script languages can also be found in commercial computer games, such as Age of Empire (to allow customization of computer behavior), and Neverwinter Night (to allow both customization of computer behavior and easy content addition).

The Office Action construed the above as an admission that use of scripting language in the context of the claimed subject matter would be well known. Applicant respectfully disagrees. The passage in the Chen article actually states that using a script language in the context of the MUMS system is a key innovation, and that script languages have been used in other applications, such as commercial computer games or chess games. Rather than providing an admission that use of script language in the claimed invention is well known, a person of ordinary skill in the art would have construed the above cited passage of the Chen article to mean that although script languages have been used in other contexts, persons of ordinary skill in the art have not realized that script languages can be applied in the context of the MUMS system.

Therefore, the Chen article does not admit that use of a script language in the context of the claimed subject matter is old or well known. In fact, the opposite appears to be true. In the context of claim 1, it is clear that the Chen article does not provide any teaching or hint, explicit or implied, of translating player definitions including an associated set of rules defining a possible decision space, a decision-making process tree, an information set, an outcome function, and a payoff function for each player into at least one codified script, which is then executed.

In view of the foregoing, it is respectfully submitted that claim 1 is not rendered obvious by the hypothetical combination of Mehta and Honarvar.

Independent claim 10 is also not rendered obvious by Mehta and Honarvar, which do not teach or hint at a script translator module for translating player definitions into codified scripts that define at least one simulation stage. Independent claim 18 is also not rendered obvious by Mehta and Honarvar, which fails to disclose or hint at translating definitions into a codified script.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. Moreover, it is respectfully submitted that dependent claims 3 and 12 are further allowable over Mehta and Honarvar for at least the reason that the references do not disclose or hint at that the players include a *combination* of human and automated players. The assertion in the Office Action that the subject matter of claims 3 and 12 are disclosed by Mehta is contradictory to the assertion in the Office Action that Adler discloses the subject matter of dependent claims 2 and 11. Claims 2 and 11 recite that the players are *exclusively* human. If

Mehta discloses this, as asserted by the Office Action, then Mehta cannot disclose that the players include a combination of human and automated players, as recited in claims 3 and 12.

With respect to dependent claim 8, the Office Action cited Mehta, at column 7, from line 55, as disclosing a script that is compiled in its entirety before execution. Specifically, the Office Action referred to the "interface classes" mentioned in the cited passage of Mehta. However, there is no teaching or hint in Mehta that the interface classes are codified scripts translated from the player definitions, which is compiled in its entirety before execution, as recited in claim 8. Therefore, the hypothetical combination of Mehta and Honarvar also fails to render obvious the subject matter of claim 8. Dependent claim 16 is similarly further allowable over Mehta and Honarvar.

In view of the foregoing, it is respectfully submitted that all claims are in condition for allowance.

RESPONSE TO REQUEST FOR INFORMATION UNDER 37 C.F.R. § 1.105

In response to the request for information under 37 C.F.R. § 1.105, Applicant provides the response below.

Pages 11 and 12 of the Office Action sought the following pieces of information:

1. Information pertaining to an experiment with Stanford University graduate students, as mentioned in Gary Charness & Kay-Yut Chen, "Minimum Advertised-Price Policy Rules and Retailer Behavior: An Experiment by Hewlett-Packard"

See ¶ 3 of the Rule 132 Declaration (attached herewith).

2. Information relating to involvement by a person associated with Caltech, as indicated in a curriculum vitae found by the Examiner at <http://www.ugcs.caltech.edu/~bruce/portfolio/index.html>.

See ¶ 4 of the Rule 132 Declaration (attached herewith).

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 08-2025 (10004567-1).

Respectfully submitted,

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